

The invention claimed is:

1 **1.** A method for determining when a request for higher transmission rate should be
2 granted to a mobile station that has access to a communication system comprising the steps of:
3 obtaining a first estimated performance indicator and a second estimated performance
4 indicator for all active connections,
5 establishing a blocking threshold, and
6 deciding whether to grant or deny the mobile station access to use the requested higher
7 transmission rate based on a comparison of the first and second indicators relative to the
8 established blocking threshold.

1 **2.** The method of claim 1 wherein the first and second estimated performance indicators
2 contain current loading and interference values.

1 **3.** The method of claim 2 wherein the first and second estimated performance indicator
2 also contain changes in loading and interference values due to connections being dropped or
3 added prior to burst start time.

1 **4.** The method of claim 1 wherein the deciding step comprises denying access at the
2 requested higher transmission rate to the mobile station when the first performance indicator
3 exceeds the blocking threshold value to avoid degradation of performance of the wireless
4 communication system.

1 **5.** The method of claim 3 wherein the deciding step grants the mobile station access to
2 use a transmission rate that is lower than the requested rate when access at the requested rate is
3 denied.

1 **6.** The method of claim 1 wherein the deciding step comprises granting access to the
2 mobile station to use the requested higher transmission rate when the first performance indicator
3 is less than or equal to the blocking threshold.

1 **7.** The method according to claim 3 wherein the obtaining step comprises obtaining a
2 projected receive signal strength indicator rise as the first estimated performance indicator and
3 estimated loading as the second indicator, the projected receive signal strength indicator rise
4 being a ratio of the estimated receive signal strength indicator at the start time to one minus the

5 projected change of loading for the mobile station requesting the new channel divided by one
6 minus the estimated loading.

1 8. The method of claim 1 wherein the establishing step comprises establishing a
2 threshold defined by a maximum blocking threshold wherein the maximum blocking threshold is
3 set at a value which will prevent overloading of the communication system.

1 9. The method of claim 7 wherein the obtaining step further comprises obtaining the
2 projected receive signal strength indicator rise and the estimated loading, each for all active
3 connections.

1 10. The method of claim 7 wherein the estimated loading is the sum of the current
2 loading contributions from each connection which is used to obtain a value of the first indicator.

1 11. The method of claim 10 wherein the projected loading is the sum of the estimated
2 loading and the change of loading for each possible higher rate which is used to obtain a discrete
3 value of the first indicator for each loading.

1 12. The method of claim 10 wherein the deciding step grants the mobile station access to
2 the highest possible rate which provides a first indicator value that is below the blocking
3 threshold.

1 13. The method of claim 8 wherein the maximum blocking threshold is constant for
2 different estimate loading values.

1 14. The method of claim 8 wherein the maximum blocking loading decreases as the
2 loading increases.

1 15. The method of claim 8 wherein the maximum blocking loading decreases in steps as
2 the loading increases.

1 16. The method of claim 8 wherein the maximum blocking loading decreases uniformly
2 as the loading increases.